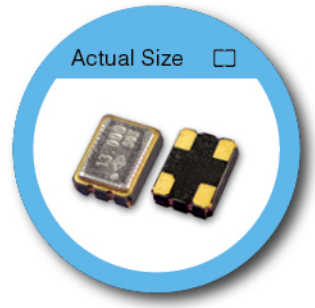
OX Type
3.2 x 2.5 mm SMD Crystal Oscillator



RoHS Compliant Standard

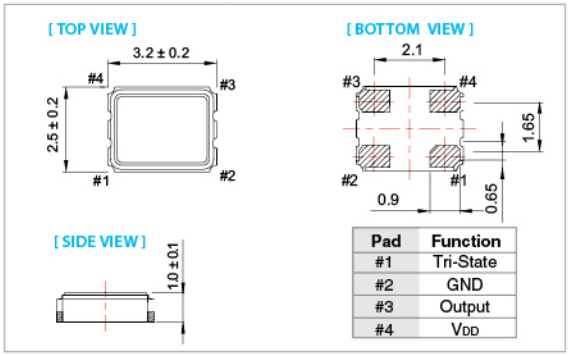
FEATURE

- Typical 3.2x2.5x1.05 mm ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Operation voltage: 1.8V, 2.5V, 3.3V
- Tri-state enable/disable

TYPICAL APPLICATION

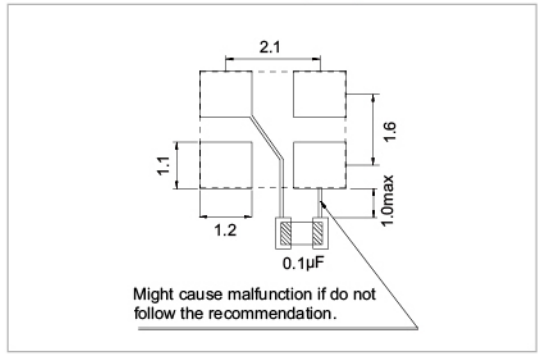
- WLAN/WiMax,
- Mobile Phone
- DSC, Set-top Box, HDTV

DIMENSION (mm)



Pad	Function
#1	Tri-State
#2	GND
#3	Output
#4	V_{DD}

SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter	3.3 V		2.5 V		1.8 V		unit
	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (V_{DD}) 10%	2.97	3.63	2.25	2.75	1.62	1.98	V
Frequency Range	0.032768	125	0.032768	125	0.032768	125	MHz
Standard Frequency	24, 26, 32, 38.4, 40						
Supply Current F0 = 0.032768KHz	–	3		2		1.5	mA
1MHz ≦ F0 <100MHz	–	15	–	10	–	7	
100MHz ≦ F0 <125MHz	–	25	–	20	–	12	
Duty Cycle	45	55	45	55	45	55	%
Output Level (CMOS) Output High (Logic "1")	90%V_{DD}	–	90%V_{DD}	–	90%V_{DD}	–	V
Output Low (Logic "0")	–	10%V_{DD}	–	10%V_{DD}	–	10%V_{DD}	
Transition Time:Rise/Fall Time+							
F0 = 0.032768KHz	–	50	–	50	–	50	nSec
1MHz ≦ Fo < 20MHz	–	3	–	4	–	5	
20MHz ≦ Fo < 125MHz	–	2	–	3	–	4	
Start Time	–	2	–	2	–	2	mSec
Tri-State(Input to Pin 1) Enable (High voltage or floating)	0.7 V_{DD}	–	0.7 V_{DD}	–	0.7 V_{DD}	–	V
Disable (Low voltage or GND)	–	0.3 V_{DD}	–	0.3 V_{DD}	–	0.3 V_{DD}	
Absolute Clock Period Jitter	–	40	–	40	–	40	pSec
RMS Phase Jitter (Integrated 12KHz ~ 20MHz)	–	1	–	1	–	1	pSec
Standby Current	–	15	–	15	–	15	μA
Aging (@ 25℃ 1st year)	–	±3	–	±3	–	±3	ppm
Storage Temp. Range	-55	125	-55	125	-55	125	℃

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.
+ Transition times are measured between 10% and 90% of V_{DD}, with an output load of 15pF.
Packing: Tape & Reel, 3000pcs per Reel.

FREQ. STABILITY vs. TEMP. RANGE

Temp.(℃) \ ppm	±20	±25	±50
-10 ~ +60	○	○	○
-20 ~ +70	△	○	○
-40 ~ +85	×	△	○

* ○: Available △:Conditional X: Not available
* Inclusive of calibration @ 25 °C, operating temperature range, input voltage variation, load variation, aging (1st year), shock, and vibration